

## ABSTRACT

A capacitive touch-controlled automatic faucet comprises: a spout, a magnetically latching valve, a proximity sensor, a handle, a capacitive touch-control, and a logical control. The proximity sensor is sensitive to motion of objects within a detection zone of the proximity sensor. The handle determines a water flow rate and temperature. The capacitive touch-control is positioned in the spout and generates an output signal while the touch-control is in contact with a user. The logical control receives the output signal, and toggles the magnetically latching valve when the output signal begins and ends within a period of time less than a predetermined threshold, but does not toggle the magnetically latching valve when the output signal persists for a period longer than the predetermined threshold. The faucet has a manual mode, wherein the proximity sensor is inactive, and a hands-free mode, wherein water flow is toggled in response to the proximity sensor.